**DECLARATION**

As a below named inventor, I declare that:

My residence, post office address and citizenship are as stated below next to my name; I believe I am an original, first and joint inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled: **RECIRCULATING FLUIDIC NETWORK AND METHODS FOR USING THE SAME**, and assigned Application No. 10/517,942.

I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above. I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56. I claim foreign priority benefits under Title 35, United States Code, Section 119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed.

I hereby claim the benefit under Title 35, United States Code § 119(e) of any United States provisional application(s) listed below:


Application No.	Filing Date

I claim the benefit under Title 35, United States Code, Section 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, Section 112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, Section 1.56 which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

Application No.	Date of Filing	Status
PCT/US2003/019775	23 June 2003 (23.06.03)	

Full Name of Inventor 1:	Last Name: <u>Manger</u>	First Name: <u>Jan</u>	Middle Name or Initial: <u>D.</u>	
Residence & Citizenship:	City: <u>San Francisco</u> CA	State/Foreign Country: California	Country of Citizenship: GB	
Post Office Address:	Post Office Address: 236 Dorland Street	City: San Francisco	State/Country: US	Postal Code: 94114
Full Name of Inventor 2:	Last Name: Barco	First Name: Joseph	Middle Name or Initial: W.	
Residence & Citizenship:	City: San Francisco	State/Foreign Country: California	Country of Citizenship: US	
Post Office Address:	Post Office Address: 90 Parkridge Drive, Apt. 8	City: San Francisco	State/Country: US	Postal Code: 94141
Full Name of Inventor 3:	Last Name: Nassef	First Name: Hany	Middle Name or Initial: R.	
Residence & Citizenship:	City: San Mateo	State/Foreign Country: California	Country of Citizenship: US	
Post Office Address:	Post Office Address: 1857 Nash Drive	City: San Mateo	State/Country: US	Postal Code: 94401

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Signature of Inventor 1  _____ Ian D. Manger	Signature of Inventor 2 _____ Joseph W. Barco	Signature of Inventor 3 _____ Hany R. Nassaf
Date: 7/18/2005	Date:	Date:

60375094 v1



DECLARATION

As a below named inventor, I declare that:

My residence, post office address and citizenship are as stated below next to my name; I believe I am an original, first and joint inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled: RECIRCULATING FLUIDIC NETWORK AND METHODS FOR USING THE SAME, and assigned Application No. 10/517,942.

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I hereby claim the benefit under Title 35, United States Code § 119(e) of any United States provisional application(s) listed below:


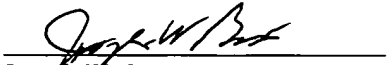
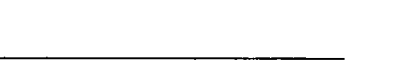
Application No.	Filing Date

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Application No.	Date of Filing	Status
PCT/US2003/019775	23 June 2003 (23.06.03)	

Full Name of Inventor 1:	Last Name: Manger	First Name: Ian	Middle Name or Initial: D.
Residence & Citizenship:	City: Bronxville	State/Foreign Country: New York	Country of Citizenship: GB
Post Office Address:	Post Office Address: 64 Kensington Road, Apt. 3B	City: Bronxville	State/Country: US Postal Code: 10708
Full Name of Inventor 2:	Last Name: Barco	First Name: Joseph	Middle Name or Initial: W.
Residence & Citizenship:	City: San Jose CA	State/Foreign Country: California	Country of Citizenship: US
Post Office Address:	Post Office Address: 2341 Bailey Avenue	City: San Jose	State/Country: US Postal Code: 95128
Full Name of Inventor 3:	Last Name: Nassef	First Name: Hany	Middle Name or Initial: R.
Residence & Citizenship:	City: San Mateo	State/Foreign Country: California	Country of Citizenship: US
Post Office Address:	Post Office Address: 1857 Nash Drive	City: San Mateo	State/Country: US Postal Code: 94401

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Signature of Inventor 1	Signature of Inventor 2	Signature of Inventor 3
		
Ian D. Manger	Joseph W. Barco	Hany R. Nassaf
Date:	Date: 5/24/05	Date:

60375094 v1

**DECLARATION**

As a below named inventor, I declare that:

My residence, post office address and citizenship are as stated below next to my name; I believe I am an original, first and joint inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled: RECIRCULATING FLUIDIC NETWORK AND METHODS FOR USING THE SAME, and assigned Application No. 10/517,942.

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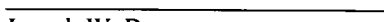
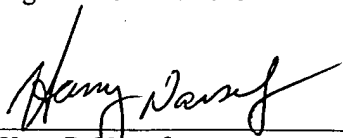
Application No.	Filing Date

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Application No.	Date of Filing	Status
PCT/US2003/019775	23 June 2003 (23.06.03)	

Full Name of Inventor 1:	Last Name: Manger	First Name: Ian	Middle Name or Initial: D.
Residence & Citizenship:	City: Bronxville	State/Foreign Country: New York	Country of Citizenship: GB
Post Office Address:	Post Office Address: 64 Kensington Road, Apt. 3B	City: Bronxville	State/Country: US Postal Code: 10708
Full Name of Inventor 2:	Last Name: Barco	First Name: Joseph	Middle Name or Initial: W.
Residence & Citizenship:	City: San Jose	State/Foreign Country: California	Country of Citizenship: US
Post Office Address:	Post Office Address: 2341 Bailey Avenue	City: San Jose	State/Country: US Postal Code: 95128
Full Name of Inventor 3:	Last Name: Nassef	First Name: Hany	Middle Name or Initial: R.
Residence & Citizenship:	City: San Mateo CA	State/Foreign Country: California	Country of Citizenship: US
Post Office Address:	Post Office Address: 1857 Nash Drive	City: San Mateo	State/Country: US Postal Code: 94401

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Signature of Inventor 1	Signature of Inventor 2	Signature of Inventor 3
		
Ian D. Manger	Joseph W. Barco	Hany R. Nassaf
Date:	Date:	Date: 5/27/05

60375094 v1

STATEMENT UNDER 37 CFR 3.73(b)Applicant/Patent Owner: Ian D. Manger et al.Application No./Patent No.: 10/517,942

Filed/Issue Date: _____

Entitled: RECIRCULATING FLUIDIC NETWORK AND METHODS FOR USING THE SAMEFluidigm Corporationa corporation

(Name of Assignee)

(Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is:

1. ☒ the assignee of the entire right, title, and interest; or
2. ☐ an assignee of an undivided part interest

in the patent application/patent identified above by virtue of either:

- A. ☒ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached.

OR

- B. ☐ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as shown below:

1. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached.

2. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached.

3. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet.

- ☐ Copies of assignments or other documents in the chain of title are attached.

[NOTE: A separate copy (i.e., the original assignment document or a true copy of the original document) must be submitted to Assignment Division in accordance with 37 CFR Part 3, if the assignment is to be recorded in the records of the USPTO. See MPEP 302.8]

The undersigned (whose title is supplied below) is empowered to sign this statement on behalf of the assignee.

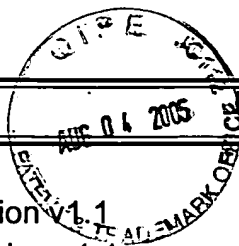
2005 August 2
Date

Patrick M.
Signature

Patrick M. Boucher (Reg. No. 44,037)
Typed or printed name

Attorney of Record
Title

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



PATENT ASSIGNMENT

Electronic Version v1.1
Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT								
NATURE OF CONVEYANCE:	ASSIGNMENT								
CONVEYING PARTY DATA									
<table border="1"><thead><tr><th>Name</th><th>Execution Date</th></tr></thead><tbody><tr><td>Ian D. Manger</td><td>07/18/2005</td></tr><tr><td>Joseph W. Barco</td><td>05/24/2005</td></tr><tr><td>Hany R. Nassef</td><td>05/27/2005</td></tr></tbody></table>	Name	Execution Date	Ian D. Manger	07/18/2005	Joseph W. Barco	05/24/2005	Hany R. Nassef	05/27/2005	
Name	Execution Date								
Ian D. Manger	07/18/2005								
Joseph W. Barco	05/24/2005								
Hany R. Nassef	05/27/2005								
RECEIVING PARTY DATA									
Name:	Fluidigm Corporation								
Street Address:	7100 Shoreline Court								
City:	South San Francisco								
State/Country:	CALIFORNIA								
Postal Code:	94080								
PROPERTY NUMBERS Total: 1									
<table border="1"><thead><tr><th>Property Type</th><th>Number</th></tr></thead><tbody><tr><td>Application Number:</td><td>10517942</td></tr></tbody></table>	Property Type	Number	Application Number:	10517942					
Property Type	Number								
Application Number:	10517942								
CORRESPONDENCE DATA									
Fax Number:	(415)576-0300								
<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>									
Phone:	4155760200								
Email:	pmboucher@townsend.com								
Correspondent Name:	Patrick M. Boucher								
Address Line 1:	Townsend and Townsend and Crew LLP								
Address Line 2:	Two Embarcadero Center - 8th Floor								
Address Line 4:	San Francisco, CALIFORNIA 94111								
NAME OF SUBMITTER:	Patrick M. Boucher								

Signature:	/patrickmboucher/
Date:	08/02/2005
Total Attachments: 6 source=008610US#page1.tif source=008610US#page2.tif source=008610US#page3.tif source=008610US#page4.tif source=008610US#page5.tif source=008610US#page6.tif	
RECEIPT INFORMATION EPAS ID: PAT45698 Receipt Date: 08/02/2005 Fee Amount: \$40	



Attorney Docket No.: 020174-008610US
Client Reference No.: F131.K2.US

ASSIGNMENT OF PATENT APPLICATION

JOINT

WHEREAS, Ian D. Manger of 236 Dorland Street, San Francisco, CA 94114; Joseph W. Barco of 90 Parkridge Drive, Apt. 8, San Francisco, CA 94141; and Hany R. Nassef of 1857 Nash Drive, San Mateo, CA 94401, hereinafter referred to as "Assignors," are the inventors of the invention described and set forth in the below-identified application for United States Letters Patent:

Title of Invention: **RECIRCULATING FLUIDIC NETWORK AND METHODS
FOR USING THE SAME**

Date(s) of execution of Declaration: Manger 7/18/2005; Barco 5/24/2005; Nassef 5/27/2005

Filing Date:

Application No.: 10/517,942; and

WHEREAS, Fluidigm Corporation, a corporation of the state of California, located at 7100 Shoreline Court, South San Francisco, CA 94080, hereinafter referred to as "ASSIGNEE," is desirous of acquiring an interest in the invention and application and in any U.S. Letters Patent and Registrations which may be granted on the same;

For good and valuable consideration, receipt of which is hereby acknowledged by Assignors, Assignors have assigned, and by these presents do assign to Assignee all right, title and interest in and to the invention and application and to all foreign counterparts (including patent, utility model and industrial designs), and in and to any Letters Patent and Registrations which may hereafter be granted on the same in the United States and all countries throughout the world, and to claim the priority from the application as provided by the Paris Convention. The right, title and interest is to be held and enjoyed by Assignee and Assignee's successors and assigns as fully and exclusively as it would have been held and enjoyed by Assignors had this Assignment not been made, for the full term of any Letters Patent and Registrations which may be granted thereon, or of any division, renewal, continuation in whole or in part, substitution, conversion, reissue, prolongation or extension thereof.

Assignors further agree that they will, without charge to Assignee, but at Assignee's expense, (a) cooperate with Assignee in the prosecution of U.S. Patent applications and foreign counterparts on the invention and any improvements, (b) execute, verify, acknowledge and deliver all such further papers, including patent applications and instruments of transfer, and (c) perform such other acts as Assignee lawfully may request to obtain or maintain Letters Patent and Registrations for the invention and improvements in any and all countries, and to vest title thereto in Assignee, or Assignee's successors and assigns.

Assignors hereby authorize and request Townsend and Townsend and Crew LLP, Two Embarcadero Center, Eighth Floor, San Francisco, CA 94111-3834, to insert herein above the application number and filing date of said application when known.

IN TESTIMONY WHEREOF, Assignors have signed their names on the dates indicated.

Dated: 7/18/2005



Ian D. Manger

Dated: _____

Joseph W. Barco

Assignment
Attorney Docket No.: 020174-008610US
Page 2

Dated: _____

Hany R. Nassef

60490414 v1

ASSIGNMENT OF PATENT APPLICATION

JOINT

WHEREAS, Ian D. Manger of 236 Dorland Street, San Francisco, CA 94114; Joseph W. Barco of 90 Parkridge Drive, Apt. 8, San Francisco, CA 94141; and Hany R. Nassef of 1857 Nash Drive, San Mateo, CA 94401, hereinafter referred to as "Assignors," are the inventors of the invention described and set forth in the below-identified application for United States Letters Patent:

Title of Invention: **RECIRCULATING FLUIDIC NETWORK AND METHODS
FOR USING THE SAME**

Date(s) of execution of Declaration: Manger 7/18/2005; Barco 5/24/2005; Nassef 5/27/2005

Filing Date:

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For good and valuable consideration, receipt of which is hereby acknowledged by Assignors, Assignors have assigned, and by these presents do assign to Assignee all right, title and interest in and to the invention and application and to all foreign counterparts (including patent, utility model and industrial designs), and in and to any Letters Patent and Registrations which may hereafter be granted on the same in the United States and all countries throughout the world, and to claim the priority from the application as provided by the Paris Convention. The right, title and interest is to be held and enjoyed by Assignee and Assignee's successors and assigns as fully and exclusively as it would have been held and enjoyed by Assignors had this Assignment not been made, for the full term of any Letters Patent and Registrations which may be granted thereon, or of any division, renewal, continuation in whole or in part, substitution, conversion, reissue, prolongation or extension thereof.

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Assignors hereby authorize and request Townsend and Townsend and Crew LLP, Two Embarcadero Center, Eighth Floor, San Francisco, CA 94111-3834, to insert herein above the application number and filing date of said application when known.

IN TESTIMONY WHEREOF, Assignors have signed their names on the dates indicated.

Dated: _____

Ian D. Manger

Dated: May 24, 2005

Joseph W. Barco

Assignment
Attorney Docket No.: 020174-008610US
Page 2

Dated: _____

Hany R. Nassef

60490414 v1

ASSIGNMENT OF PATENT APPLICATION

JOINT

WHEREAS, Ian D. Manger of 236 Dorland Street, San Francisco, CA 94114; Joseph W. Barco of 90 Parkridge Drive, Apt. 8, San Francisco, CA 94141; and Hany R. Nassef of 1857 Nash Drive, San Mateo, CA 94401, hereinafter referred to as "Assignors," are the inventors of the invention described and set forth in the below-identified application for United States Letters Patent:

Title of Invention: RECIRCULATING FLUIDIC NETWORK AND METHODS
FOR USING THE SAME

Date(s) of execution of Declaration: Manger 7/18/2005; Barco 5/24/2005; Nassef 5/27/2005

Filing Date:

Application No.: 10/517,942; and

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Dated: _____

Joseph W. Barco

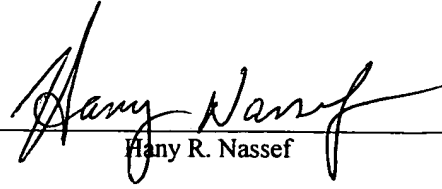
Assignment

Attorney Docket No.: 020174-008610US

Page 2

Dated: _____

5/27/05


Hany R. Nassef

60490414 v1